



IN THE UNITED STATES PATENT & TRADEMARK OFFICE

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Recons. Sub.
11/13/02

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| Appln. Ser. No.: | Filed: | Inventor(s): | Atty Dkt: |
| 09/543,951 | 6 April 2000 | W. Dalton | 1633-015A |
| Title: Improved Brush Seal Designs for Turbines and Similar Rotary Apparatus | | | |
| Examiner: M. Rogers | | | Art Unit: 3677 |

Asst. Comm'r for Patents
Washington, D.C. 20231-0001

RESPONSE TO OFFICE ACTION

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Dear Sir:

In complete and timely response to the Office Action mailed 1 August 2002, reexamination and reconsideration of the subject application, pursuant to and consistent with 37 C.F.R. § 1.104 and § 1.112, and in light of the following remarks, are respectfully requested.

Claims 1-9 stand rejected under 35 U.S.C. 103 as obvious over the combination of Brandon and Bagepalli (*et al.*). After reciting the teachings of each reference, the rejection concludes that it would have been obvious to make the seal of Brandon incorporating a brush seal with opposing ends cut non-parallel with the radii of the axis of the shaft, presumably because Bagepalli discloses a brush having ends cut non-parallel with the radii of the axis of the shaft. This rejection is respectfully traversed.

Brandon describes a retractable seal with multiple arcuate segments, each of the ends of the segments cut parallel with a radius from the axis of the shaft. Accordingly, incorporating a brush into those segments one would cut the brush along the same radius.

Bagepalli describes a seal with segments (26, 28) connected by a mounting block (30), the mounting block circumferentially biased with respect to the segments, the ends of the segments cut parallel with the radii, and a brush seal attached to the mounting block with its ends cut non-parallel with the radii.

Accordingly, the rejection chooses only the brush portion without consideration of the structure in which the brush is housed. "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art'. *In re Wesslau*, 353 F.2d at 241, 147 USPQ at 393." *In re Hedges*, 783 F.2d 1038, 228 USPQ 685, 687 (Fed. Cir. 1986). See also *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) ("One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."); *Symbol Technologies Inc. v. Opticon Inc.*, 19 USPQ2d 1241 (Fed. Cir. 1991)

As explained by the enclosed Declaration under 37 C.F.R. § 1.132 by Erik Sulda, the Bagepalli patent cannot function as a retractable seal because of the structure of the segments and mounting blocks forming the seal segment. As explained in more detail in Mr. Sulda's declaration, the circumferential overlap between the mounting block of one seal segment and the individual segments (26, 28) of the circumferentially adjacent seal segment would prevent the seal segments from retracting.

As the citation above from *Hedges* (and the other citations) makes clear, it is impermissible to pick and choose from a reference only so much of the disclosure as will support a rejection. The Bagepalli brush is provided within a particular structure, and the background section of Bagepalli illustrates problems that the disclosed invention is designed to avoid. The Bagepalli brush structure cannot be taken out of context of the surrounding structure in which it is housed. As disclosed by Bagepalli, the segments are usually cut flat, and the bristles are normally canted, but canting the bristles at a segment end creates very sharp edges; accordingly, the canted brush segment is circumferentially displaced (under the circumferentially displaced mounting block) for worker safety.

Because the brush and the segment structure of Bagepalli are intimately related for the purpose of Bagepalli's patent, the issue properly framed is whether the Bagepalli segments (with their respective brush portions) can be used as a

retractable seal. As explained above and by Mr. Sulda in his declaration, the Bagepalli segments will not function as a retractable seal.

The issue framed in the rejection is incomplete or incorrect. As noted above, merely incorporating a brush into the Brandon segments would suggest that the brush is cut like those segments are cut. One cannot merely remove the brush from the Bagepalli segment and insert it into the Brandon segment because the law requires that the environment and structure providing the context for that brush be considered, and Bagepalli teaches that the pointed end of the brush segment should not extend past the end of the side segments (26, 28) as it does in the presently-claimed invention.

Therefore, the suggested combination of references is improper, and the claimed invention would not have been obvious over the combination asserted.

In conclusion, withdrawal of the rejections, and further and favorable action, in the form of a notice of allowance, are believed to be next in order, and such actions

Respectfully submitted,



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1 November 2002

**CERTIFICATE OF MAILING OR
TRANSMISSION – 37 CFR 1.8**

I hereby certify that I have a reasonable basis that this paper, along with any referred to above, (i) are being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231, or (ii) are being transmitted to the U.S. Patent & Trademark Office in accordance with 37 CFR § 1.6(d).

DATE: 11/1/02

NAME: Heather McLennand

SIGNATURE: Heather McLennand